

# ABSTRACT OF THE DISCLOSURE

This invention is provided for improvement of corrosion-resistant property of a crucible and for promotion of safety in a pyrochemical reprocessing method for the spent nuclear fuel. The spent nuclear fuel is dissolved in a molten salt placed in the crucible. In a pyrochemical reprocessing method, the nuclear fuel is deposited, and the crucible (2) is heated by induction heating. Cooling media (5, 6) are supplied to cool down, and a molten salt layer (7) is maintained by keeping balance between the heating and the cooling, and a solidified salt layer (8) is formed on inner wall surface of the crucible.